

# Business Data Lake for Operational Reporting



**How shifting to the Business Data Lake helps businesses improve operational reporting**

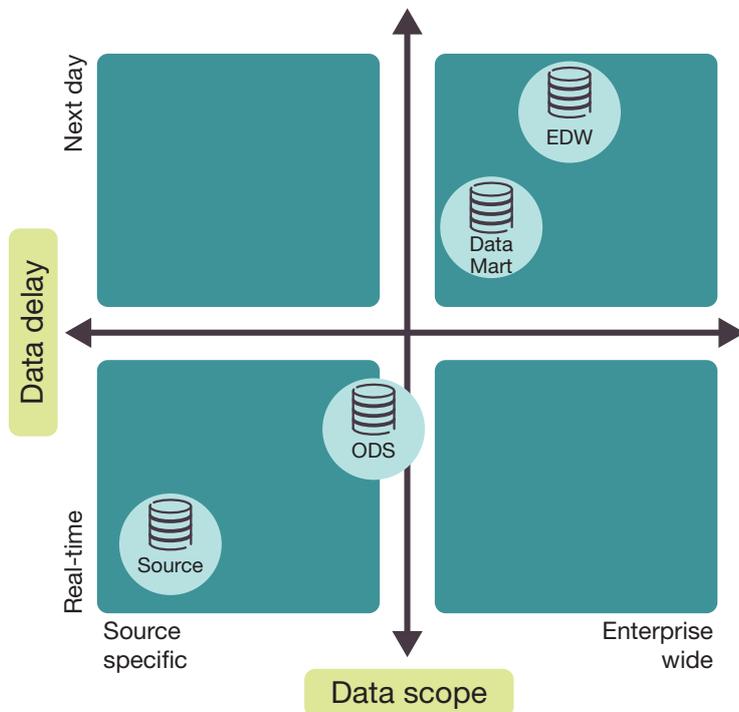
## **Operational Reporting – data in the raw**

Operational reporting is the lifeblood of business: it empowers the day-to-day changes and adjustments that keep a business in line with its strategic objectives and delivers the first indicators of trouble. For something so important, it's been a significant challenge for IT. Because operational reporting is, by its very nature, a local challenge while IT's data solutions tend to focus on the enterprise. The Pivotal Data Lake makes it possible to meet operational reporting requirements at the local level and provides a base for delivering wide-ranging benefits across the enterprise.

## **Data delayed is opportunity denied**

At the heart of the challenge of operational reporting is timeliness. It's about reacting to what is happening now, because the sooner you know about an event the better the response will be.

Figure 1: Time against scope



IT tends to focus on two solutions to this challenge. Firstly, access to standard screens within source systems, which are rarely strong at reporting. And secondly the creation of operational data stores (ODS) which replicate the source information into another database where some reporting can be done. These ODS solutions are then separated to the data marts and EDWs where a greater investment is made on the reporting tools and capabilities.

The challenge for IT is that those ODS solutions run on different platforms to data marts and EDWs. They are tuned differently and this results in fragmented solutions for problems that are, in many ways, linked: today's operational challenge is tomorrow's strategic issue.

The challenge for IT, therefore, is how to offer near real-time reporting and analytics in a way that feeds the strategic view.

### Operational data in the Pivotal Business Data Lake

The Pivotal Business Data Lake is designed to enable line of business solutions in a single platform that also addresses enterprise needs. For operational reporting this means providing three key capabilities:

1. The ability to rapidly copy information from source systems into the Business Data Lake
2. The ability to create standard and ad-hoc reports
3. The ability to add real-time alert management

### PDD - The replication tool

The first challenge is how to copy information from source systems into the Business Data Lake. It's here that Pivotal Data Dispatch provides a visual tool for replicating source information into the Business Data Lake. This includes managing third-party real-time replication technologies where PDD's 10 second response time is not quick enough.

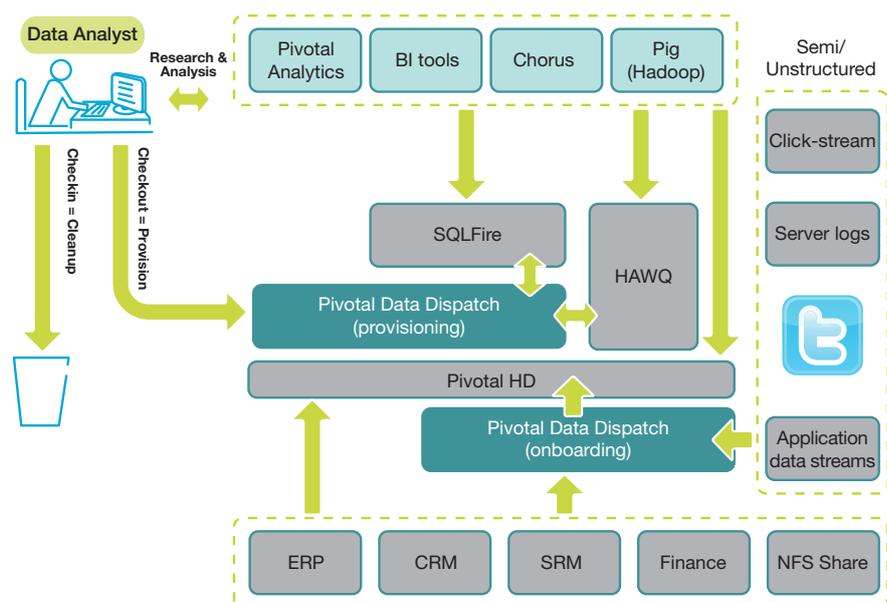
### HAWQ and SQLFire

Most ERP systems have specific database schemas that require interpretation through business logic to make sense. Using PDD it is possible to create these maps within the Business Data Lake and then use the fast HAWQ technology to meet most operational reporting needs. When multiple users and continual access are needed, for instance for mobile reporting, using the SQLFire in-memory database of the Business Data Lake gives business users near instantaneous response times.

### Event on ingest – SQLFire and GemFire

The final capability is what really enables IT to go beyond traditional solutions for operational reporting and instead deliver true event-based solutions. The Pivotal Business Data Lake isn't simply a database against which reports can be run – it's an active data platform where in-coming information can automatically trigger alerts and system events to keep the business on track.

Figure 2: PDD Data Management



### Data in context

One of the biggest challenges that operational reporting solutions face today is that they look only at the small picture, when it's the bigger picture that usually drives decision-making. The Pivotal Business Data Lake is a new approach to information management, one that encourages line of business and operational solutions but which also provides an information fabric – a means for getting information from across the enterprise and pulling it into operational reporting.

### Context in the enterprise

If an ERP report also requires information on stock from another division, clarity on a strategic objective or external information such as the weather, it is possible to combine all of this information within the Pivotal Business Data Lake. Encouraging all parts of the organization to dynamically create their own operational and departmental reporting solutions helps encourage users to look at master and reference data management to better leverage each other's information to their

mutual advantage. The corporate view is then just the aggregation of these LoB views and again the outputs from the corporate view can be used to direct operational decision-making.

Figure 3: How the corporate view works



Looking at information in this way makes operational reporting an integral part of the performance of the business. Given that operations is where the rubber hits the road, this is exactly as it should be.

### Context in history and future

The other challenge for operations is the analytics of operations in the context of history: what happened last time this situation occurred? It's here that the Pivotal Business Data Lake really offers a new dimension on operational information: *time*. Because it leverages the low cost storage technologies of big data, the Pivotal Business Data Lake can automatically include all history of every attribute. This gives operational managers not simply the ability to compare the current status with historical trends but also to institute next generation approaches such as predictive asset maintenance and predictive demand forecast. By providing the context in history as well as in the enterprise, operational reporting goes beyond simply 'looking at the now' and begins to provide a window onto the future.

### Summary

Operational reporting has long been a challenge for enterprises – how to meet local reporting needs while focusing on an enterprise context. The Pivotal Business Data Lake solves this conundrum – it is no longer a question of operational versus enterprise views. It becomes simply a question of finding the right view on data to meet a business need.

The Pivotal Business Data Lake provides lightning fast in-memory analytics and mobile BI support as well as predictive analytics capabilities. This brings to operational reporting the power of modern BI and analytics in a platform that can be leveraged across the business.

Operational reporting is the lifeblood of business and Pivotal's Business Data Lake embeds it as a core component of your information strategy.

Find out more at  
[www.capgemini.com/bdl](http://www.capgemini.com/bdl)  
and  
[www.gopivotal.com/businessdatalake](http://www.gopivotal.com/businessdatalake)

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